

REMARKS

The Office Action dated February 3, 2004, has been received and carefully noted. The above amendments to the claims, and the following remarks, are submitted as a full and complete response thereto.

Claim 9 has been amended to more particularly point out and distinctly claim the subject matter of the invention. No new matter has been added, and no new issues are raised that require further consideration and/or search. Thus, entry of the amendment at this time is proper. Claims 2-7 and 9-11 are pending in the present application, and are respectfully submitted for consideration.

Claims 2-5, 9 and 11 were rejected under 35 U.S.C. §102(e) as allegedly being anticipated by U.S. Patent No. 5,790,534 (*Kokko et al.*) The Office Action took the position that *Kokko* disclosed all the elements of the claims. Applicants respectfully submit that the presently pending claims recite subject matter that is neither disclosed nor suggested by *Kokko*.

Claim 9, upon which claims 2-5 and 11 are dependent, recites a method for controlling transmission resources of a radio access network adapted to transmit data packets in real time traffic and in non- real time traffic. The method comprises obtaining information related to transmission resources required for handling real time traffic in a radio network controller. The method also includes reserving transmission resources for handling non-real time traffic based on a knowledge of overall available transmission resources of a radio transceiver device of the radio access network and the information

related to the transmission resources required for handling real time traffic by the radio transceiver. The respectively allocated reserve transmission resources are distinguished on the basis of ATM virtual path identifiers and virtual channel identifiers.

As discussed in the present specification, the present invention enables the control of transmission resources of a radio access network adapted to transmit data packets in real time traffic and in non-real time traffic that alleviates time consuming channel activation/deactivation procedures while effectively making use of the entire available physical resources of a respective base station. Thus, a radio network controller may not need to rely on bearer information, such as physical channel information like carrier frequency, code and/or timeslot. Traffic may be controlled over a packet switched radio access network. It is respectfully submitted that the prior art of *Kokko* fails to disclose or suggest the elements of the presently pending claims. Therefore, *Kokko* fails to provide the critical and unobvious advantages discussed above.

Kokko relates to a load control method and apparatus for a code division multiple access cellular system having circuit and packet switched terminals. A base station of *Kokko* is in a CDMA radio system and controls the data transmission from packet terminals to the base station so that the radio resources allocated for the system are utilized optimally. *Kokko* describes controlling traffic and partitioning traffic on a radio interface. *Kokko* describes a base station controller 16 that determines the mode of the system over several cells, and determines a separate limit value for each base station 14.

The various base stations 14 of *Kokko* control packet terminals 12 and their

respective cells based on this limit value. Each load monitor 14B determines the total cell communications loading, and then transmits this value to base station controller 16. Base station controller 16 of *Kokko* sends each base station 14 a value for the limit for the packet mode resources. The value of the packet mode resources varies from cell to cell. *Kokko*, however, does not disclose or suggest obtaining information related to transmission resources required for handling real time traffic in a radio network controller, wherein the respective allocated reserve transmission resources are distinguished on the basis of ATM virtual path identifiers and virtual channel identifiers.

In contrast, claim 9 recites "obtaining information related to transmission resources required for handling real time traffic in a radio network controller" and "wherein the respectively allocated reserved transmission resources are distinguished on the basis of ATM virtual path identifiers and virtual channel identifiers." Applicants submit that at least these features are not disclosed or suggested by *Kokko*.

As noted above, *Kokko* describes controlling traffic and partitioning traffic on a base station in a CDMA radio system. *Kokko* describes load monitor 14B determining the total cell communications loading when transmitting this value to base station controller 16. The base station controller then sends each base station 14 a value for the packet mode limit. Thus, the functionality described in *Kokko* occurs only in the base station and in the mobile station.

Applicants submit that this aspect of *Kokko* does not disclose or suggest obtaining information related to transmission resources required for handling real time traffic in a

radio network controller, wherein the respectively allocated reserved transmission resources are distinguished on the basis of ATM virtual path identifiers and virtual channel identifiers. Moreover, the presently pending claims do not rely on WCDMA codes as identifiers. Referring to claim 9, the respectively allocated reserved transmission resources are distinguished "on the basis of ATM virtual path identifiers and virtual channel identifiers." The identifiers described in *Kokko* do not disclose or suggest virtual path identifiers or virtual channel identifiers.

The use of ATM virtual path identifiers and virtual channel identifiers for allocating reserved transmission resources in distinguishing these resources are applied in a radio access network according to the presently pending claims. Thus, the ATM virtual path identifiers and virtual channel identifiers may be used to partition traffic on an interface between a radio network controller and a base station. Applicants submit that *Kokko* addresses a partitioning of traffic on the air interface between the base station and mobile station. On such an air interface of *Kokko*, virtual path identifiers and virtual channel identifiers are not available as distinguishing channel elements.

Applicants submit that, for at least these reasons, *Kokko* does not disclose or suggest all the features of claims 2-5, 9 and 11. Applicants respectfully request that the Examiner withdraw the anticipation rejection of these claims.

Claims 6 and 7 were rejected under 35 U.S.C. §103(a) as allegedly being unpatentable over *Kokko* in view of U.S. Patent No. 6,278,701 (*Ayyagari et al.*) The Office Action concedes that *Kokko* "does not expressly disclose wherein said update

condition resides in that a predetermined time of day is reached." The Office Action alleges that *Ayyagari* discloses these features missing from *Kokko* in that *Kokko* "could be modified so that the update occurs at periodic intervals adapted to occur at certain points during the day." Applicants respectfully submit that neither *Kokko* nor *Ayyagari* disclose or suggest all the features of the presently pending claims.

Claims 6 and 7 depend from claim 9, summarized above. Thus, claims 6 and 7 are not disclosed or suggested by *Kokko*, at least for the reasons given above. Specifically, *Kokko* does not disclose or suggest "obtaining information related to transmission resources required for handling real time traffic in a radio network controller" and "wherein the respectively allocated reserved transmission resources are distinguished on the basis of ATM virtual path identifiers and virtual channel identifiers," as recited in claim 9. Applicants also respectfully submit that *Ayyagari* does not disclose or suggest these features of claim 9.

Ayyagari relates to a capacity enhancement for multi-code CDMA with integrated services through quality of services and emission control. *Ayyagari* describes estimating the capacity of a CDMA carrier for both voice and data users using an interference-based analysis of a reverse link. Several codes are allocated to a single high-speed data user for parallel transmission to enhance capacity utilization in a multi-code CDMA network architecture. *Ayyagari* describes using an interference-based model for the reverse link, mobile to base station, that determines the number of voice users and the number of data users belonging to each data class that a CDMA carrier can support. *Ayyagari* also

describes providing emission control schemes that maximize system capacity by controlling power allocation, quality of service levels, and/or user activity levels. *Ayyagari*, however, does not disclose or suggest obtaining information related to transmission resources required for handling real time traffic in a radio network controller, wherein the respectively allocated reserved transmission resources are distinguished on the basis of ATM virtual path identifiers and virtual channel identifiers.

In contrast, claim 9, from which claims 6 and 7 depend, recites "obtaining information related to transmission resources required for handling real time traffic in a radio network controller" and "wherein the respectively allocated reserve transmission resources are distinguished on the basis of ATM virtual path identifiers and virtual channel identifiers." Applicants submit that *Ayyagari* does not disclose using ATM virtual path identifiers and virtual channel identifiers in determining the number of voice users and the number of data users belonging to each data class to provide emission control schemes. Thus, *Ayyagari* does not disclose or suggest at least these features of independent claim 9 missing from *Kokko*.

In addition, claims 6 and 7 depend from claim 9, which is non-obvious. If a dependent claim depends from a non-obvious independent claim, then the dependent claim is not obvious. MPEP §2142.03. For at least these reasons, Applicants submit that claims 6 and 7 are not disclosed or suggested in the cited references.

Claim 10 was rejected under 35 U.S.C. §103(a) as allegedly being unpatentable over *Kokko* in view of U.S. Patent No. 6,374,112 (*Widegren et al.*) The Office Action

concedes that *Kokko* does not disclose "wherein said channel element identifiers of virtual path identifiers VPI and virtual channel identifiers VCI." The Office Action alleges that *Widegren* "discloses a system that has resource allocation in a CDMA system for ATM from packet switched and circuit switched networks." The Office Action also alleges that "ATM inherently has BPI/VCI information in the header to identify the mobile from other mobile stations and to identify the path taken to the mobile station." Applicants respectfully submit that neither *Kokko* nor *Widegren* disclose or suggest all the features of the presently pending claims.

Widegren relates to a flexible radio access and resource allocation in a universal mobile telephone system. *Widegren* describes flexible radio access and resource allocation in a universal mobile telephone system. *Widegren* describes a universal mobile telecommunications system terrestrial radio access network (UTRAN) 24 over a radio access network interface. UTRAN 24 includes one or more radio network controllers 26, wherein each radio network controller 26 is connected to a plurality of base stations 28 and to any other radio network controllers in UTRAN 24. Radio communications between the base stations 28 and mobile radio stations 30 are by way of a radio interface. *Widegren*, however, does not disclose or suggest obtaining information related to transmission resources required for handling real time traffic in a radio network controller, wherein the respectively allocated reserve transmission resources are distinguished on the basis of ATM virtual path identifiers or virtual channel identifiers.

In contrast, claim 9, from which claim 10 depends, recites "obtaining information related to transmission resources required for handling real time traffic in a radio network controller" and "wherein the respectively allocated reserved transmission resources are distinguished on the basis of ATM virtual path identifiers and virtual channel identifiers." Applicants submit that *Widegren* does not disclose or suggest these features missing from *Kokko*.

Applicants submit that *Widegren* does not disclose or suggest distinguishing respectively allocated reserved transmission resources on the basis of ATM virtual path identifiers and virtual channel identifiers. Referring to Figure 4 in *Widegren*, virtual path identifiers and virtual channel identifiers are not disclosed or suggested. At most, *Widegren* describes an ATM connection in the UTRAN, in a radio channel over an air interface that includes one or more CDMA radio codes. Applicants submit these aspects of *Widegren* do not disclose or suggest virtual path identifiers and virtual channel identifiers. The Office Action asserts that ATM inherently has VPI/VCI information in the header and that the system of *Kokko* could be modified to use ATM cells as packets.

Applicants, however, fail to find any teaching within *Widegren* that discloses or suggests that virtual path identifiers or virtual channel identifiers are used by the respectively reserved transmission resources. The Examiner merely states that "ATM inherently has VPI/VCI information in the header to identify the mobile from other mobile stations and to identify the path taken to the mobile station." Applicants submit that *Widegren* does not disclose or suggest the features claimed in claim 9. "The fact that

a certain result or characteristic may occur or be present in the prior art is not sufficient to establish inherency of that result or characteristic." MPEP §2112. "In relying upon the theory of inherency, the Examiner must provide a basis in fact and/or technical reasoning to reasonably support the determination that the allegedly inherent characteristic necessary that flows from the teachings of the applied prior art." *Ex parte Levy*, 17 USPQ2d. 1461, 1464 (Board of Patent Appeals and Interferences (1990)).

Applicants submit that obtaining information related to transmission resources required for handling real time traffic in a radio network controller, wherein the respectively allocated reserved transmission resources are distinguished on the basis of ATM virtual path identifiers and virtual channel identifiers does not necessarily flow from the teachings of *Widegren*. The fact that virtual path identifiers and virtual channel identifiers may be present in an ATM connection of *Widegren* does not disclose or suggest the features recited in the claims.

At least for these reasons, Applicants submit that claims 6, 7 and 10 are not rendered obvious by the cited references. Applicants respectfully request that the Examiner withdraw the obviousness rejections of claims 6, 7 and 10.

It is submitted that claims 2-7 and 9-11 recite subject matter that is neither disclosed nor suggested in the cited prior art. Specifically, the cited prior art does not disclose or suggest all the features of independent claim 9, and claims 2-7 and 10-11 which depend therefrom. It is therefore respectfully requested that all of the presently pending claims 2-7 and 9-11 be allowed, and this application passed to issue.

If for any reason the Examiner determines that the application is not now in condition for allowance, it is respectfully requested that the Examiner contact, by telephone, the applicants' undersigned attorney at the indicated telephone number to arrange for an interview to expedite the disposition of this application.

In the event this paper is not being timely filed, the applicants respectfully petition for an appropriate extension of time. Any fees for such an extension together with any additional fees may be charged to Counsel's Deposit Account 50-2222.

Respectfully submitted,



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Enclosures: Petition for Extension of Time